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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/661,130	09/13/2000	Abraham R. Matthews	1384.003US1	7711
21186	7590	10/18/2004	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402			THOMPSON, MARC D	
			ART UNIT	PAPER NUMBER
			2144	10

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

09/661,130

Applicant(s)

MATTHEWS ET AL.

Examiner

Marc D. Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

***DETAILED ACTION***

1. This application has been reassigned to a new Examiner. See Conclusion section below, for new Examiner contact information.
2. Amendment A, Paper #9, received 4/9/2004, has been entered into record.
3. Claims 1-9 are now pending.

***Priority***

4. No claim for priority has been made in this application.
5. The effective filing date for the subject matter defined in the pending claims in this application is 9/13/2000.

***Specification***

6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Drawings***

7. This application has been filed with informal drawings on 9/13/2000 which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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9. Claim 1 recites functional element(s) labeled “virtual router”. The breadth of this term renders this claim indefinite for the inability to properly ascertain what constitutes this logical device. Since the “router” is indeed “virtual”, what it exactly is is never recited.

10. Claim 1 uses “one or more processing elements” multiple times rendering the claim indefinite due to the inability to determine which processing element(s) are being referenced. Specific recitation of real and/or logical processing element(s) defined as part of the system, optionally labeled separately, is strongly advised to determine metes and bounds of the claimed invention.

11. All the pending claims rely heavily on proper interpretation of the claimed invention based on the meaning and usage of the term “virtual”. As understood in the art, virtual devices are not real, instead they are logical constructs attempting to describe actual programmatic functional code and potentially associated hardware. The claims and specification fail to properly define “virtual router(s), interface(s), and network connection(s)” in sufficient detail to enable one of ordinary skill in the art to determine what may or may not constitute an infringing device/functional element. Further, assuming *arguendo* that the terms are properly defined within the specification and claims to equate actual device(s)/element(s) with these arbitrary labels, the details of the specification cannot be relied on to discern exactly what is being claimed, minimally, since the claims are necessarily broader than the preferred embodiment (best mode) set forth in the specification. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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12. Lastly, the preamble of the claims recite a “routing system”. Claim 1 recites a “virtual routing system”, and claim 7 recites, simply, “a routing system”. No routing determinations or decisions are made by the claimed invention. It is not readily apparent, or required, that actual routing occurs. First, there may be potential enablement issues with the currently submitted claims, since, there is clear inability to ascertain particular metes and bounds to the claims as a whole, and additionally to (each) particular element(s) recited in the claim(s). This renders these claims indefinite. Second, the breadth of the claims as previously and currently submitted is stunning. Nothing recited in any one of the claims is found outside of the background of the invention in the specification. General knowledge in the art at the time of invention provided tunneling, VPN support, virtual connectivity, virtual routing of information to particular terminal VPN participants, and multiplexing (i.e., aggregation) of traffic and information flows. Applicant has admitted the prior knowledge of these basic technology features in the specification.

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

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14. Claims 1-9 are rejected under 35 U.S.C. §102(e) as being anticipated by Salkewicz (U.S. Patent Number 6,609,153), hereinafter referred to as Salkewicz.

15. Salkewicz disclosed virtual routing functionality, inter alia, in Column 11, Lines 7-9, and Column 11, Lines 37-48. These logical “devices” were described as enabled to handle multiple virtual connections to neighboring terminal(s) (i.e., multiple devices), inter alia, in Column 11, Lines 16-36, and Column 12, Lines 40-64, as well as functionally aggregating traffic over both logical constructs and physical media. See, inter alia, Column 13, Lines 8-16. “Binding”, as described and understood in the art “couples” connections to processes executing on the local hardware using an interface. Minimally, this allows VPN support on the public Internet (inter alia, Columns 7-8 and 14-15) and complete granularity of control over traffic flows in each, and between, particular VPN definitions (inter alia, Column 7, Lines 29-65). Lastly, a “system router” was clearly evident. See, inter alia, Column 8, Lines 40-42.

16. Claims 1-9 are rejected.

17. Claims 1-9 are rejected under 35 U.S.C. §102(e) as being anticipated by Rao et al. (U.S. Patent Number 6,674,756), hereinafter referred to as Rao.

18. Rao disclosed multiple virtual routers, wherein each router had distinct routing table(s) and available resource record(s). See, inter alia, Abstract. Further, each functional “router” offered connectivity to multiple VPN interfaces. See, inter alia, Abstract, and Figure 17.

Utilizing the router to route traffic regarding network policies as well as specific connection parameters were also described, inter alia, in Figure 12. Selective VPN traffic filtering for aggregated flows was well known in the art. See, inter alia, Column 2, Lines 35-40. Multiple

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embodiments provide multiple routers, multiple terminals for each router, and multiple flows through each physical medium. See, inter alia, Column 9, Lines 30-44.

19. Claims 1-9 are rejected.

20. Claims 1-9 are rejected under 35 U.S.C. §102(e) as being anticipated by Rekhter et al. (U.S. Patent Number 6,463,061), hereinafter referred to as Rekhter.

21. Rekhter disclosed aggregated traffic flows between virtual multiple routing devices, multiple endpoint terminals, and multiple virtually defined networks. See, inter alia, Abstract, Figures 1 and 7, and Column 5, Lines 7-40. Again, binding is disclosed, providing logical connection association with particular process(es) and/or terminals. See, inter alia, Column 8, Lines 38-60. VPN definition/establishment, connection tunneling, both intra- and inter-VPN traffic, and virtual network connections, associated identifiers, and generic connective interfaces were also disclosed. See, inter alia, Columns 5, 7-8, and 21-22.

22. Claims 1-9 are rejected.

### *Response to Arguments*

23. The arguments presented by Applicant in the response, Paper #9, received on 4/9/2004, are not considered persuasive.

24. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

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25. Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

26. The breadth of all the claims examined thus far is completely unwarranted. Applicant's own specification describes all the previously and currently claimed invention as established in the art. Significant modification of the claims is required for proper patentability determination(s). Likewise, significant discussion about the expressly recited functionality, terms, and supporting portions of the specification is strongly advised to advance prosecution of the current application.

#### ***Conclusion***

27. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.



28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc D. Thompson whose telephone number is 703-308-6750. The examiner can normally be reached on Monday-Friday, 9am-4pm. Note: The Examiner expects to move to the new PTO site in Carlyle in the next few months, and contact information will change at that time.

If not available at the above number, The Examiner can be reached at 571-272-3932. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, William Cuchlinski, Jr., can be reached at 703-308-3873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

29. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit 2144